

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 4:10 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 471 Const Calendar Day: 534 Date: 20-Nov-2013 Wednesday

Inspector Name: Soheilifard, Saman Title: Transportation Engineer

Inspection Type: Continuous

Shift Hours: 07:15 am 05:30 pm Break: 00:30 Over Time: 02:00

Federal ID:

Location:

Reviewer: Awal, Mohammad Approved Date: 30-May-14 Status: Approved

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather****Temperature** 7 AM 50 - 60 12 PM 50 - 60 4PM**Precipitation** none**Condition** RainWorking Day ☒ If no, explain:**Diary:**

Dispute

Work description.

Wednesday, November 20, 2013

Pile Driving (Post Mobilization)

Day Piles 1 & 2 (West of the T1 Foundation)

The following two outfits hired by Caltrans will be present during this pile driving operation:

Illingworth & Rodkin, Inc (Acoustic Monitoring)

Jordan Roberts

Chris Peters

Jarred McDaniel

Keith Pommerenck

Garcia & Associates (Mammal Monitoring)

Phil Thorson

Adam Fox

Marina Olson

Carrol Kiper

Jordan told me that the threshold for an instantaneous impact is 206 db, but there is no provision for shutting down the operation, should this threshold exceed.

Phil told me that if seals get to within 95ft of piles during the impact portion of Pile Driving, the operation has to be stopped. There is a 1000ft exclusionary zone during the vibratory portion of the operation, the breaching of which will not require work stoppage, however.

- By 8:45, the welding of template was done in the rain;

- By about 9:00, rain stopped;

- At 9:50, the 1st of the 80-ft long piles was lifted and at about 10:00 stabbed;

- At 10:00, while attached to the crane and a 35' mark at water-line, the adjusting of Pile #1 began. This pile is on the West side of the footing and just South of Shear Plate "c".

- At 10:35, adjusting complete, pile released, & drizzle began. At this time 51-ft mark was at the water-line;

- Vibratory Hammer (V.H.) was placed on this pile and some adjusting of the jaws on the VH was needed;

- At 11:04, with the 2nd pile stabbed, the VH was placed on pile #2 as Sammy & I had to leave the site;

- At 11:20, upon our return, Pile #1 had been vibrated down to the 58-ft mark and Pile #2 to the 57-ft mark (at the water-line). Pile #2 is also located on the West side of the Tower and Shear Plate "c".

- It should be noted that of the 12 piles that are planned to be driven, 6 slated for the West side of the Tower are 80 feet long and the six planned to be driven on the deeper East side are 100 feet long.

- By 13:30, all hoses were attached to the bubble curtain on Pile #2;



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- These two piles were marked only to 71 feet and the top 9 feet remained un-marked;
- By 14:05, the Delmag hammer was placed in the lead, hammer cushion attached, and the hammer hoisted over the pile but there were problems starting it;
- By 15:00, the hammer was fixed;
- At 15:03, hammer was hoisted over Pile #2 and ;
- At 15:05, hammer was on the pile;
- Some References: At this time pile is at 56-ft mark with respect to (WRT) the top rung of the Bubble Curtain (BC) which is 1 foot above water; 62-foot mark is aligned with the top flange attached to the barge (used for X-reference);
- At 15:13, BC is turned on;
- At 15:14, the first blow causing quite a bit of movement ;

The Blow count generated:

Driven, ft	Blows
1	5
2	14
3	18
4	22
5	26
6	34
7	46
7.5	44

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End at 15:30; Top flange at the 69/2-foot mark, which corresponds to the length above (used as X-reference);

- According to Dutra, the stroke of this old Delmag is set to 8 feet. One cannot see the stroke as the hammer is shielded with housing. According to Dutra's calculations, in order to achieve the required bearing capacity (that I am not privy to know) is reached, once the blow counts reach 22. This was easily exceeded after driving the pile for only 5 feet.
- At 15:35, working off a boat, the workers un-hooked the hoses to BC at pile #2;
- At 15:51, BC was placed on pile #1;
- Jordan told me that the sound reached a peak of 197 db, which is < the max of 206 db;
- Some references: At 15:58, water was at the 55 mark on Pile #1 and the top rung of the BC at the 58-ft mark; 61 1/2 -mark is right above the top flange of the beam connected to the barge;
- At 16:07, all hoses to BC were attached;
- At 16:08, Delmag on top of pile #1;
- At 16:11, BC is turned on;
- At 16:12, first blow;

The Blow count generated:

Driven, ft	Blows
1	8
2	16
3	26
4	43
5	44
5.25	10

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Pile driving complete at 16:17 with the top flange at the 66 3/4-foot mark, which agrees with the length driven (X-reference);

- Peak Decible: 196/197 < Max of 206
- (Sound Equivalent Level) SEC : 184 – 187

Notes

- Barge 217 is the barge that has all the 12 piles loaded on it from which EM 1106 picks up piles for the production work. This barge is moored next to Kelso on the North side of the T1 foundation. Barge 1106



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is the barge with a crane built on it that bears the name BUCYRUS.

•Asked Mike Eddy for the Pile Driving information (the hammer...)He e-mailed it to me at about 10:15, but I will not have access to computer until I find a respite to go to the office.

•At 10:20, I received a call from Shewitt telling me that Dutra has complained about the excessive monitors on-site. I said that I was not aware of such a complaint and gave the count of those present and stated that I did not feel that they hindering work whatsoever.

Embedment Length Calculation for Pile #1:

BC Length: 45 ft

Before Impact Hammer: Top rung of BC at the 58-ft mark;

58-45 = 13ftin the ground before the Impact Hammer (IH)

Pile Driven about 5 1/2ft

Therefore, the Embedment Length is: 13 + 5 ½= 18 ½ ft

Embedment Length Calculation for Pile #2:

BC Length: 45 ft

Before Impact Hammer: Top rung of BC at the 56-ft mark;

56-45 = 11ftin the ground before the Impact Hammer (IH)

Pile Driven about 7 1/2ft

Therefore, the Embedment Length is: 11 + 7 ½= 18 ½ ft

04-0120F4 Bid Item: 041 0-000-000.041 ERECT PRECAST CONCRETE FENDER MODULES

DUTRA MATERIALS

Labor

Trade	Class	Name	RT Hrs	OT Hrs	DT Hrs	Total	Remarks	Dispute
Contractor: DUTRA MATERIALS								
Piledriver	JNM	WALTER QUINTERO	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	JON - PAUL CHENEY	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	APP	JAMES SAVAGE	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Operator	OTH	DAVE AVILAS	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	LUKE HUDSON	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	JEFF SAINZ	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	GILBERT MAYA	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	DAVID SELPA	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	JNM	SAMI TAVAKE	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	GEN	TREVER MURRAY	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Piledriver	APP	ROBERT UTLEY	8.00	2.00	0.00	10.00		<input type="checkbox"/>
Operator	OTH	STEVE FRIYER	8.00	2.00	0.00	10.00		<input type="checkbox"/>

Equipment

Equipment ID	Description	RT Hrs	OT Hrs	ST Hrs	IT Hrs	Rental Company	Remarks	Dispute
Contractor: DUTRA MATERIALS								
*E0650562		8.00	2.00	0.00	0.00	No		<input type="checkbox"/>
*E0140358		2.00	0.00	0.00	0.00	No		<input type="checkbox"/>
*E0660562		8.00	2.00	0.00	0.00	No		<input type="checkbox"/>
*E0620562		0.00	0.00	0.00	0.00	No		<input type="checkbox"/>



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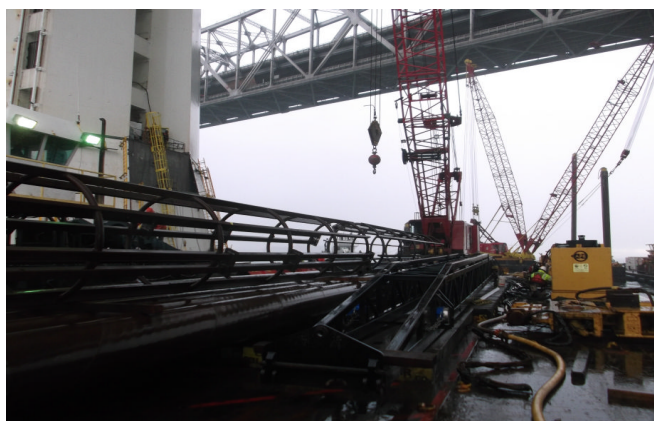
Inspector Name: Soheilifard, Saman

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Attachment



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